

REMARKS

In the Office Action, claims 1-4, 6, 7, 9-13, 15, 16 and 18-20 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,870,382 to Harris ("Harris"). The Office Action objects to claims 5, 8, 14 and 17 as being dependent on rejected independent claims.

Applicant respectfully asserts that the claims are patentable over the cited art because Harris does not teach or suggest all of the elements cited in the claims. For example, Harris does not teach or suggest calculating or otherwise determining probe float in a probe card using free-hanging planarity measurements.

The Harris system, and other currently implemented systems cannot accurately measure the range of free, electrically insulated, vertical motion ("float") during which probes are not electrically connected to the probe card (Specification, page 1, lines 23-29). Harris specifically explicitly teaches away from measuring free-hanging planarity:

Some probe companies offer optical solutions, which can report the z positions where mechanical contact occurs for each probe tip. However, optical solutions are very slow and thus not feasible in a production environment. Also, the optical measurements do not report where electrical contact occurs. This is especially important for vertical, piston-configured probe cards, where the probe needles or pins float and do not make electrical contact until the probe pin is sufficiently pressed against the pad.

(Harris at col. 5, lines 51-59). Thus, in this description Harris teaches only the measurement of planarity at the point at which a probe tip electrically contacts a contact surface and dismisses other measurements of mechanical contact as infeasible. Since probe float is representative of the travel between mechanical contact and electrical contact, it is apparent that Harris does not teach or suggest the calculation of probe float as required in the independent claims of the present Application. Thus, Harris cannot be relied upon as a basis for rejecting the claims under 35 U.S.C. § 102 because it fails to disclose or teach the calculation of probe float as required in each of the independent claims.

It is further submitted that Harris would also fail to provide a basis for rejection of the claims under 35 U.S.C. § 103 because it teaches away from the present invention and no motivation could have existed to combine Harris with any other reference to produce what Harris deems to be an infeasible result.

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Allowable Matter and Claim Objections

Applicant thanks the Examiner for acknowledging the allowable subject matter of claims 5, 8, 14 and 17. Applicant believes that the claims are allowable as presented and no other amendment is required in view of the cited art.

CONCLUSION

All objections and rejections having been addressed, and in view of the foregoing, the claims are believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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